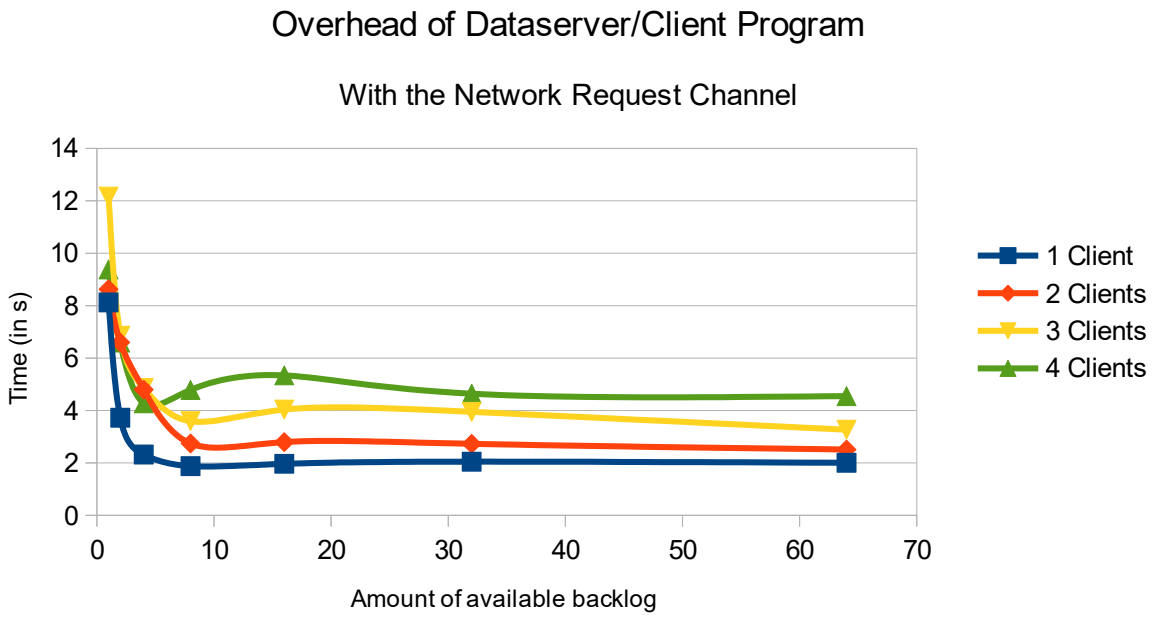
Daniel Frias

CSCE 313

Section 516

Machine Problem 5 Analysis

In this analysis, we look at the performance of the client/server program using a new request channel type: over a network. There are some changes that were made to the initial netreqchannel.hpp, which includes changing the function signature of the serverside constructor: `NetworkRequestChannel(const unsigned short _port_no, void * (*connection_handler) (void *), int backlog)`. This constructor instead takes in a function pointer whose parameter takes in a void pointer (for thread creation), and an integer that specifies the backlog (for the listen() call). We test the performance by running one until four clients, with increasing backlog, starting from 1 and doubling each time up until 64. This is the graph produced from this data, the means of the time taken in the client/s were taken:



From the graph, it can be immediately seen that the performance benefit from increasing the backlog plateus after a backlog of 8, and the expectation that four clients will always have more overhead than

one client is validated. To conclude, running more clients will result in more overhead than one, and up to a certain point, increasing the backlog buffer can increase performance of the server/client program.